

Human Factors Evaluation Automated Tool (HFE-AT), Phase I

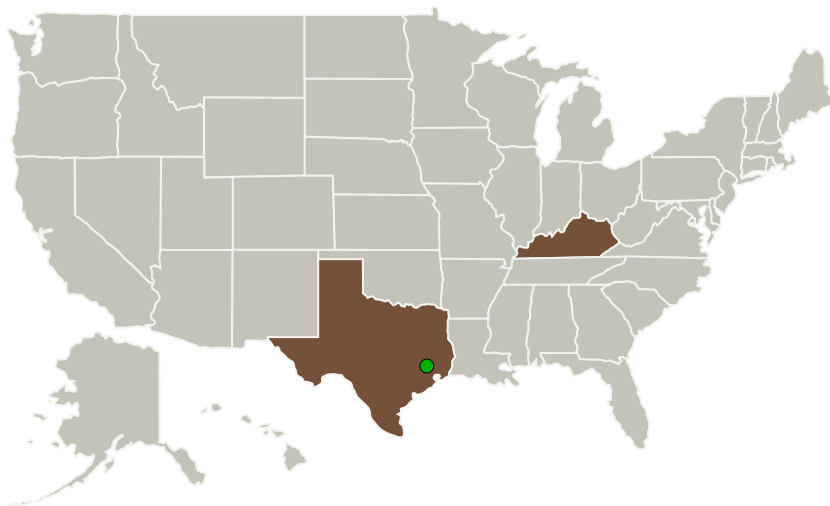
Completed Technology Project (2010 - 2010)



Project Introduction

In this proposal, TiER1 Performance Solutions and Alion Science and Technology offer to identify requirements and specifications, and implement a proof-of-concept prototype tool to support human factors evaluations. This prototype, called the Human Factors Evaluation Automated Tool (HFE-AT), will provide guidance, for non-human factors personnel, to address human factors-related aspects of the engineering design process. It will identify requirements for coordination across engineering teams to help ensure that potential human factors integration issues are identified and resolved early in the design process. HFE-AT also will indicate when more detailed human factors analyses are needed, and provide step-by-step guidance to walk users through the process of performing certain human factors analyses. It will provide a repository for the results and allow users to produce reports that help them interpret and summarize the results. In Phase I, we propose to identify the requirements for such a tool, create a plan for developing the tool, and develop a proof-of-concept prototype to demonstrate the potential for such a tool. In Phase II, we will continue the development of this tool, adding functionality and expanding the scope. We also will perform validation studies, to ensure that the tool is providing meaningful results. We will conduct usability studies, and modify the tool so that it provides an easy-to-use interface, understandable feedback, and useful results. In Phase III, we will prepare this tool for commercialization.

Primary U.S. Work Locations and Key Partners



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Organizations Performing Work	Role	Type	Location
TiER1 Performance Solutions	Lead Organization	Industry	Covington, Kentucky
● Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

Primary U.S. Work Locations	
Kentucky	Texas

Project Transitions

▶ **January 2010:** Project Start

✓ **July 2010:** Closed out

Closeout Documentation:

- Final Summary Chart(<https://techport.nasa.gov/file/140636>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

TiER1 Performance Solutions

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

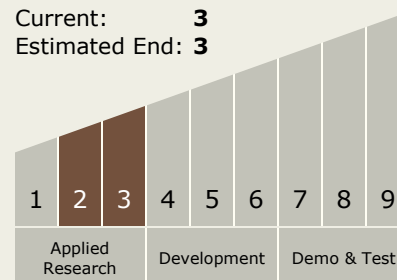
Carlos Torrez

Principal Investigator:

Terence Andre

Technology Maturity (TRL)

Start: 2
Current: 3
Estimated End: 3



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Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
 - └ TX06.6 Human Systems Integration
 - └ TX06.6.1 Human Factors Engineering

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System